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U.S. PATENT APPLICATION

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Title: 2D/3D SWITCHING TYPE LIQUID CRYSTAL DISPLAY PANEL AND
2D/3D SWITCHING TYPE LIQUID CRYSTAL DISPLAY DEVICE

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SPECIFICATION

REPLACED BY
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2D/3D SWITCHING TYPE LIQUID CRYSTAL DISPLAY
PANEL AND 2D/3D SWITCHING TYPE LIQUID CRYSTAL
DISPLAY DEVICE

TECHNICAL FIELD

The present invention relates to a 2D/3D switching type liquid crystal display panel, and to a 2D/3D switching type liquid crystal display device, each of which allows switching 2D display and 3D display.

BACKGROUND ART

In a normal field of vision, the two eyes perceive views of the world from two different perspectives due to their spatial separation within the head. The images from these two perspectives are then recognized as a

implementation discussed in the foregoing detailed explanation serve solely to illustrate the technical details of the present invention, which should not be narrowly interpreted within the limits of such embodiments and concrete examples, but rather may be applied in many variations within the spirit of the present invention, provided such variations do not exceed the scope of the patent claims set forth below.

INDUSTRIAL APPLICABILITY

According to a structure of the present invention, it is possible to provide a 2D/3D switching type liquid crystal display panel and a 2D/3D switching type liquid crystal display device. With the panel or device of the present invention, a viewing angle for 2D display can be increased as wide as that for 2D-only display. Further, the 2D/3D switching type liquid crystal display panel and the 2D/3D switching type liquid crystal display device have improved reliability against dropping and a shock. This enables the 2D/3D switching type liquid crystal display panel and the 2D/3D switching type liquid crystal display device to be suitably used for carrying out 2D/3D switched display.

panel as set forth in Claim 9, wherein:

the display liquid crystal panel and the switching liquid crystal panel are disposed face to face so that a larger of the two substrates of the display panel faces a larger of the two substrates of the switching liquid crystal panel.

12. A 2D/3D switching type liquid crystal display device, comprising: a 2D/3D switching type liquid crystal display panel capable of 2D display and 3D display, the 2D/3D switching type liquid crystal display panel including: display image generating means for generating an image in accordance with input image data; parallax barrier means for rendering a certain viewing angle to a display image during 3D display, so as to provide a 3D effect; and switching means for switching 2D display and 3D display by activating and deactivating the effect of the parallax barrier means,

the parallax barrier means and the switching means respectively having wider active areas than an active area of the display image generating means.